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SS-32666 Sealed Alkaline Cell (Toshiba) Polyolefin copolymer sealant is used
as sealant of button cells. (Pub. 4/2/81, Appl. 8/23/79)

TOKE * L03 35501 D/20 * J5 6032-666
Closed type alkaline battery - uses sealing agent of polyolefin
copolymer on battery can for improved mechanical strength etc.
TOKYO SHIBAURA ELEC LTD 23.08.79 JP-106629
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Closed type alkaline battery has sealing agent composed of
polyolefin copolymer on the sealing part of the battery can. The
copolymer has strong adhesion onto metal surface of anodic or
cathodic can. Mechanical strength, cold-resistance, thermal-,
chemical-properties are improved. Liquid leakage from gas
pressure elevation is prevented for a long period.

In an example, polyamide insulating sealing material was
provided on the sealing part between anodic can and cathodic
can. Polyolefin copolymer was further coated on the contacting
part of the cathodic or anodic can surface, which was heated at
220 deg.C for 15 sec. Electrolyte liquid of KOH aq. soln. was
sealed in the battery. The copolymer compsn. was composed of 60
wt.% polyethylene and 20 wt.% polypropylene and 10 wt.%
polybutyrene and 10 wt.% polyamylene and the coating thickness
was 60 microns.

REFERENCE
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Japanese Unexamined Patent Application, 56-32666, April 2, 1981Title: Sealed Alkaline CellApplication: August 23, 1979 Sr: 54-106629Inventors: T. Nakamura et alApplicant: Toshiba Electric Co, Tokyo Shibaura Electric Co Ltd

It relates to a method of sealing alkaline cells.

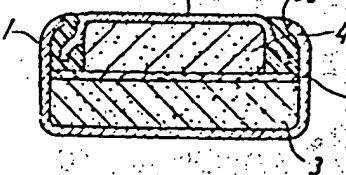
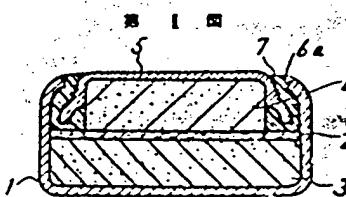
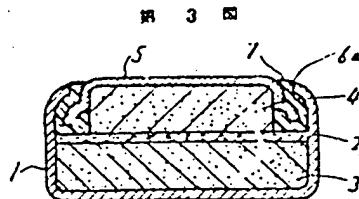
Sealing of alkaline cells is difficult because of creeping of the electrolyte thru the gaps between gasket and cell can. To prevent creeping, asphalt or resin film is formed over the surface of gasket. These sealants are not satisfactory for long-time use.

In this invention, copolymer of polyolefine is used as sealant (?) to cover the surface of gasket (6a, 6b). To further improve the adhesion between the cell can and the gasket, it is recommended to heat-treat at 180-250C.

Typical copolymer sealant of this invention comprises 25-75 wt% of polyethylene, polypropylene, polybutylene or polyamilene, and the remainder contg one of other polyolefine listed above.

Example: A copolymer of polyethylene 60 wt%, polypropylene 20 wt%, polybutylene 10 wt% and polyamilene 10 wt% is applied over a polyamide gasket with a thickness of 60 μ m, and heated at 220C for 15 sec.

Claim: Sealed alkaline cell in which a copolymer of polyolefine is used as sealant to cover the gasket.

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